Educational Adventures in the Dunes

A Teachers' Planning Guide to Environmental Education Programs in the Indiana Dunes



Indiana Dunes Environmental Education

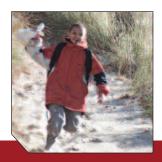
Indiana Dunes has a long, fascinating history of attracting scientists and students alike to study and explore globally rare ecosystems. The process of unlocking the mysteries of the Indiana dunes began in the late 1800s with Dr. Henry Cowles and continues today. In the spirit of further utilizing the Indiana dunes as an educational tool, organizations throughout the area offer a wide variety of environmental education programs. This Teachers' Planning Guide, "Educational Adventures in the Dunes," provides a comprehensive list of the many programs available. It is designed to assist educators and youth group leaders in understanding and using the resources available to them.

Each participating organization has its own section that explains its unique facilities and programs. Each program listed has:

- A brief description
- Information about program availability
- Appropriate age range
- Minimum and maximum group sizes
- Program cost (if applicable)
- The location and length of the program

Various teachers' workshops are listed in the first pages to showcase professional development opportunities available from the partner organizations. The uses of the Indiana dunes as a valuable teaching tool are abundant. This guide will enable educators to choose the programs that are most appropriate for them and their particular group of learners and plan exciting excursions into a whole new world of educational opportunities.











Join Us May 15-16 for the 2009 BioBlitz at Indiana Dunes

24 HOURS OF SCIENCE, LEARNING AND FESTIVITIES IN YOUR NATIONAL AND STATE PARKS

2009 BioBlitz

at Indiana Dunes

May 15-16

24 HOURS OF SCIENCE, LEARNING AND FESTIVITIES IN YOUR NATIONAL AND STATE PARKS



Students and teachers are invited to play a vital role in this year's BioBlitz at Indiana Dunes National Lakeshore. The 2009 National Park Service/National Geographic BioBlitz will take place May 15 and 16, bringing together teams of scientists, volunteers and community members to find and identify as many local plant and animal species as possible in the Indiana Dunes.

Events will be designed before and during the BioBlitz to engage students and educators at all levels. A teacher workshop will be held November 7-8 at the Dunes Learning Center to train educators in monitoring and research methods used during the BioBlitz. Teachers participating in the workshop will also be engaged in developing and leading events during the actual BioBlitz event. For more information see below.

High schools and other organized groups of teens or university students are encouraged to participate in BioBlitz 101 programs throughout the year with National Park Service staff to learn the methods and techniques necessary to participate and volunteer with scientists and monitoring teams that will be lead

Bio Blitz 101

New Workshop

NATIONAL

GEOGRAPHIC

Goal: Prepare students to become citizen scientists and participate in the first BioBlitz ever held at Indiana Dunes National Lakeshore.

Age group: 6th-12th grade Max. group size: 60

Location & length: Douglas Center or Calumet Dune Interpretive Center, 2 hrs.

Students will discover the importance of biological monitoring and performing inventories of species as they engage in scientific techniques used by researchers. By participating in this program during the school year, groups will be able to participate in the first Dunes BioBlitz to be held May 15 and 16 when citizens and scientists will be cataloging EVERY species found within our national park in a 24 hour period. Help the park make history this year!

throughout the national lakeshore and state park during that intense 24-hour study period. For more information on how to register for this program, see BioBlitz 101 workshop information below or contact the National Lakeshore's scheduling office at 219-395-1857. Check out the National Geographic website www.nationalgeographic.org for more information.

Education Resource Center 219-395-1857

www.nps.gov/indu/forteachers/

The Education Resource Center features supplemental curriculum materials that can be checked out by educators for a two-week time period. Please phone ahead for an appointment.

Video Loan Collection

Educational videos from the Richardson Wildlife Sanctuary Video Loan Collection are available on free loan to educators. These videos and CDs focus on science and natural resources and provide excellent introductory and followup materials for field trips to the dunes, as well as supplements to in-school curriculum. Call or e-mail for a complete catalogue.

Traveling Trunks

Traveling trunks on the following topics are available for loan for a period of three weeks:

- ◆ Trees and Forests
- Birds
- ♦ Mammals
- Zebra Mussels
- Great Lakes
- ♦ Acid Rain
- Vegetation Monitoring
- Climate Change
- Great Lakes Shipping
- Northwest Indiana's Indian History

Trunks must be picked up in person and cannot be shipped. Please call for a description of trunk contents or to reserve a trunk.



Indiana Dunes National Lakeshore

The Indiana Dunes National Lakeshore was established in 1966 "to preserve for the educational, inspirational, and recreational use of the public certain portions of the Indiana dunes." Today, the park is comprised of over 15,000 acres of dunes, oak savannas, swamps, bogs, marshes, prairies, rivers, and wetlands. As one of 390 units of the National Park System, Indiana Dunes National Lakeshore offers curriculum based programs for all ages. All program assist teachers in meeting state curriculum standards and a list of those standards are provided in each program's teacher packet.

Thousands of students participate in education programs at the National Lakeshore every year. The park offers programs at various locations throughout Lake, Porter, and LaPorte Counties, such as the Paul H. Douglas Center for Environmental Education, the Dorothy Buell Memorial Visitor Center, the historic areas of Bailly Homestead and Chellberg Farm, and the natural areas and trails throughout the park. It is a wonderful place to bring students for ranger-led programs or for self-guided programs. Teacher activity guides are available upon request for West Beach and Miller Woods or can be downloaded from the National Lakeshore's web site.

Discover

Goal: Explore nature's diversity using the senses.

Discover the wonders of nature along a wooded trail by using your senses.

Program availability: Year-round except

during Autumn Harvest and Maple Sugar Time

Age group: Preschool-3rd grade

Max. group size: 90

Location & Length: Douglas Center or Calumet Dune Interpretive Center, 1 hr.

The Chellbergs had a Farm

Goal: Experience and learn about Indiana's early farming traditions.

Step back in time and discover farm life in the early 1900s. Observe farm animals. Play farm games and visit an old time farm house.

as the Web Ranger Challenge.

Program availability: Year-round Age group: Preschool-3rd grade

Max. group size: 90

Location & length: Chellberg Farm, 1 hr.

Talk With the Animals

Goal: Become familiar with the wonders of animals of the dunes through the year.

Puppet characters tell a story of life in the dunes. If weather permits, students are invited to hike the trail after the show.

Program availability: Year-round Age group: Preschool-1st grade

Max. group size: 70

Location & length: Douglas Center or Calumet Dune Interpretive Center, 1 hr.

Autumn Harvest

Goal: Experience old-time life on a farm in the fall.

Sample harvest time at a turn-of-the-century farm. Gather sorghum, press cider, help with chores or play farm games. Enjoy the sights and smells of an old-time farmhouse and barn.

Program availability: September 25-October 10

Age group: All grades Max. group size: 60

Location & length: Chellberg Farm, 1.75 hrs.

Begin your visit to the Indiana Dunes

at the

Dorothy Buell Memorial Visitor Center!

Visit the new Dorothy Buell Memorial Visitor Center located on Hwy. 49, north of the interstate, with your students when you visit Indiana Dunes National Lakeshore. Students can watch two short videos on the park, engage in a hands-on Junior Ranger Activity Room, and learn about upcoming events at the new visitor center, which is jointly operated with Porter County Convention, Recreation and Visitors Commission, and the National Park Service.



Indiana Dunes National Lakeshore
www.nps.gov/indu/forteachers/
The National Lakeshore's web site has a wealth of information
for teachers and students. Students can play interactive games such a



Mount Baldy Moves or West Beach Walk

Goal: Explore the dunes and experience the forces of nature that created them.

Observe water, wind, and waves in action and learn how they work together to form mountains of sand.

Program availability: Spring/summer/fall

Age group: Preschool-3rd grade

Max. group size: 90

Location & length: Mount Baldy or West Beach, 1 hr.

Caretakers of the Dunes

Goal: Students participate in service learning activities that assist in preserving and protecting resources of the park in an educational context.

Become a park steward and learn about the amazing biodiversity found in the dunes by participating in one of four program themes below:

- ◆ Aliens in the Forest Students remove invasive plant species such as garlic mustard and help save habitat for native flora.
- <u>Prairie Pathways</u> Students participate in a variety of activities, such as transplanting native species or collecting seeds, to restore Mnoké Prairie.
- ♦ <u>Wetland Wanderings</u> Students learn about the value of wetlands and focus on wetland restoration activities such as transplanting native species.
- ◆ <u>Adopt-a-Beach</u> Students learn lakeshore ecology while contributing to its monitoring and clean-up.

Program availability: Spring/summer/fall

Age group: 4th-12th grade

Max. group size: 60

Location & length: Throughout park, 1.5 to 3 hrs.

No charge for any National Lakeshore program.







Year-Round Scheduling at National Lakeshore

Beginning Monday, August 18, educators can reserve ranger-led programs for the entire 2008-2009 school year. Educators can continue to contact the National Lakeshore scheduling office throughout the year to reserve their field trips. Call 219-395-1857 or toll-free at 1-800-959-9174.

Seasonal program dates are as follows:

- **♦** Fall Education Programs: September 25-December 19
- **♦** Autumn Harvest Programs: September 25-October 10
- ♦ Winter Education Programs within the park: January 6-February 13
- ♦ Maple Sugar Time Programs: February 26-March 13
- ◆ Spring Education Programs within the park: April 1-May 30
- ♦ BioBlitz: May 15-16
- **♦** Summer Education Programs within the park: June 15-August 14

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All National Lakeshore programs assist educators in meeting state curriculum standards.

Maple Sugar Time

Goal: Learn and experience the making of this purely American product.

Learn about "horse-power," examine maple trees, and see the Native American, pioneer, and sugar shack methods of making maple sugar and syrup. Tour the Chellbergs' 19th-century farmhouse and visit the animals in the barn.

Program availability: February 26-March 13

Age group: K-5th grade Max. group size: 60

Location & length: Chellberg Farm, 1.75 hrs.

Fall Fanfare

Goal: Experience and learn about the changing of the seasons.

Cool weather and shorter days bring beautiful changes. Discover the flurry of activity as plants and animals prepare for winter.

Program availability: October and November

Age group: 1st-6th grade Max. group size: 90

Location & length: Kemil Beach or Douglas Center, 2 hrs.

Winter Exploration

Goal: Experience and learn about the beauty and ecology of winter.

Explore the beauty of the winter woods during a nature hike after viewing an indoor slide show focusing on animal adaptations. Learn how plants and animals adapt to winter. Snowshoes are provided. If there is insufficient snow, a hike will be led.

Program availability: January 6-February 13

Age group: 3rd-6th grades Max. group size: 36

Location & length: Calumet Dune Interpretive Center,

1.5 hrs.

Indians and Fur Traders

Goal: Experience local history focusing on American Indian lifestyles and the fur trade.

Journey back in time to learn about the lifestyles of the American Indians, fur traders, and voyageurs during this period of change in Northwest Indiana.

Program availability: Year-round Age group: 3rd-8th grade Max. group size: 90

Location & length: Bailly Homestead, 2 hrs.

A Grain of Truth

Goal: Explore the dunes and gain a personal experience of how they came to be.

Observe how winds and powerful waves work to create and erode moving sand dunes. Hike the foredunes and beach to learn about the processes of dune building, glaciation, and erosion.

Program availability: Spring/summer/fall

Age group: 4th-8th grade Max. group size: 90

Location & length: West Beach or Mount Baldy, 1.5 hrs.

Lake Michigan Alive

Goal: Appreciate the diversity of life within this region's most important natural resource and learn about some of the issues affecting Lake Michigan.

Dress a student as a fish. Play a food chain game. View preserved sea lamprey and trout. Students are encouraged to help care for the Great Lakes. This program is primarily indoors but does include a 30-minute trip to the lake.

No charge for any National Lakeshore program.

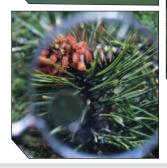
Program availability: Year-round Age group: 4th-12th grade

Max. group size: 60

Location & length: Douglas Center, 1.5 hrs.

including beach hike











Water World

Goal: Experience and explore the diversity of life within a wetland.

Armed with nets and pans, investigate the rich diversity of pond life and learn the importance of conserving our water resources. For a more in-depth experience, students take the 3-hour hike option to explore Lake Michigan's water resources.

Program availability: April-October

Age group: 4th-12th grade

Max. group size: 48

Location & length: Douglas Center, 2 or 3 hrs.

Habitat Hike

Goal: Learn about the importance of biodiversity through a hike into the National Lakeshore's many habitats.

Discover why the Indiana dunes has almost 1,400 species of plants, ranking it 4th highest of all National Park areas! Explore forest, dunes, a swamp, and sand prairie, while studying environmental factors that affect plant survival.

Program availability: Year-round except during Autumn Harvest and Maple Sugar Time

Age group: 4th-12th grade

Max. group size: 90

Location & length: Kemil Beach Parking Lot, 2 hrs.

Reflections on Snow

Goal: Appreciate and learn about the beauty and ecology of winter.

Discover the thrill of cross-country skiing. Indoor activities explore tracking, predation, and winter habitats. Ski equipment provided. If snow is insufficient, a hike will be led.

Program availability: January 6-February 13

Age group: 5th-12th grade

Max. group size: 60

Location & length: Meet at Calumet Dune

Interpretive Center, 2.5 hrs.

Pinhook Bog

Goal: Learn about and appreciate this rare, fragile gift of the glaciers.

Hike into the strange and unique world of the bog. Walk on a floating mat of sphagnum moss and discover insect-eating plants.

Program availability: Mid-April through mid-November

Age group: 6th-12th grade

Max. group size: 30 (depending on staff availability)
Location & length: Meet at the Calumet Dune

Interpretive Center, 2 hrs.

Secrets of Succession

Goal: Experience and appreciate the variety of plant communities found in the dunes.

Follow the legacy of early dunes scientist Henry Chandler Cowles and hike from the beach over foredunes and through forests. By exploring the environment, discover the forces that shape the dunes and produce this unique succession of plants.

Program availability: Spring/Summer/Fall

Age group: 6th-12th grade

Max. group size: 90

Location & length: West Beach, 2 hrs.







National Lakeshore Rangers Will Visit Your Schools and Groups!

Contact the park's scheduling office to reserve a school visit by a ranger during the following times:

- September 3-12
- ♦ November, December, January, and February

To reserve a ranger site visit, please arrange for one large group or several small groups throughout the day to ensure at least 75 students can be reached. The site visits are also limited by the distance and weather. Rangers will conduct programs on a variety of subjects and will work with your school to create a site visit that meets your curricula needs.

Teachers' Planning Guide Incorporate our Environmental Education Programs into your classroom agenda!

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Teachers' Planning Guide
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Partners



FRIENDS is a non-profit organization that sponsors a variety of park events and activities to enhance the understanding, appreciation, and enjoyment of the Indiana dunes.





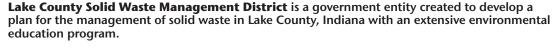
The Great Lakes Research and Education Center, funded through the National Park Service, facilitates research in 10 national parks within the Western Great Lakes Region and brings new knowledge about our natural and cultural resources to the eyes of the public.



The Dunes Learning Center serves as an education center and environmental learning laboratory on the site of the National Park Service's Camp Good Fellow.



Indiana Dunes National Lakeshore was established in 1966 to "to preserve for the educational, inspirational, and recreational use of the public certain portions of the Indiana dunes."





Recycling and Waste Reduction District of Porter County is a state-mandated agency devoted to reducing waste and improving the quality of life for Porter County residents. With this goal in mind, the District offers a variety of environmental education programs.



Save the Dunes Conservation Fund's mission is to protect and restore the Indiana dunes and surrounding natural resources through environmental research, legal safeguards, and strategic conservation initiatives.



Dunes Learning Center 700 Howe Road Chesterton, Indiana 46304 NON-PROFIT ORGANIZATION U.S. POSTAGE PAID VALPARAISO, IN PERMIT #134